

Claims:

1. A nerve regenerating drug which comprises a substance that inhibits the activity of glycogen synthase kinase-3 (hereinafter, abbreviated as GSK-3), as an active ingredient.

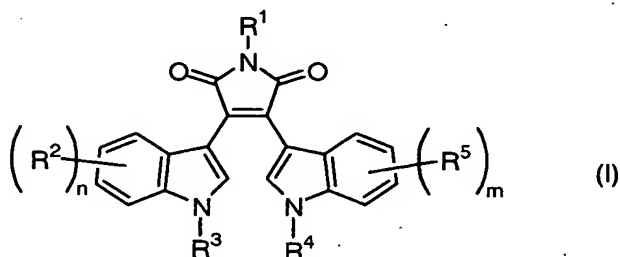
2. The medical drug according to claim 1 wherein the nerve regenerating drug is a therapeutic drug for a neurological disease.

3. The medical drug according to claim 2 wherein the neurological disease is selected from the group consisting of Parkinson's disease, Alzheimer's disease, Down's disease, cerebrovascular disorder, cerebral stroke, spinal cord injury, Huntington's chorea, multiple sclerosis, amyotrophic lateral sclerosis, epilepsy, anxiety disorder, schizophrenia, depression and manic depressive psychosis.

4. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits the activity of GSK-3 is lithium or a pharmacologically acceptable salt thereof.

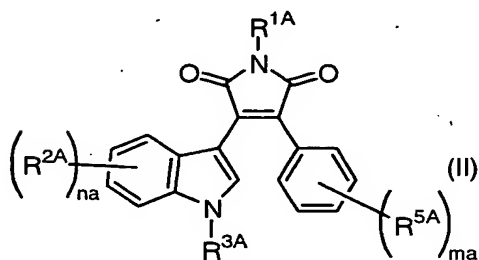
5. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits the activity of GSK-3 is a bisindolylmaleimide derivative, a 3-aryl-4-indolylmaleimide derivative, an indolocarbazole derivative, an indolo[3,2-d][1]benzazepin-6(5H)-one derivative or an indirubin derivative, or a pharmacologically acceptable salt thereof.

6. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits the activity of GSK-3 is a compound represented by the formula (I):

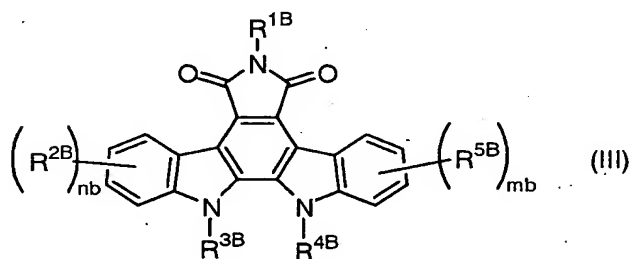


[wherein n and m may be the same or different, and represent an integer of 1 to 3; R^1 , R^3 and R^4 may be the same or different, and represent hydrogen, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, $-COR^6$ (wherein R^6 represents hydrogen, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted aryl or substituted or unsubstituted cycloalkyl), $-COOR^7$ (wherein R^7 represents hydrogen, substituted or unsubstituted lower alkyl, substituted or unsubstituted aryl or substituted or unsubstituted cycloalkyl) or $-OR^8$ (wherein R^8 represents hydrogen, substituted or unsubstituted lower alkyl, substituted or unsubstituted aryl or substituted or unsubstituted cycloalkyl); R^2 and R^5 may be the same or different, and represent hydrogen, substituted or unsubstituted lower alkyl, a substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkoxy, substituted or unsubstituted lower alkoxy carbonyl, substituted or

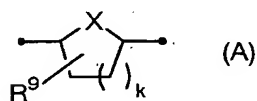
unsubstituted aryl, carboxy, halogen, hydroxy, nitro, amino, or mono- or di-lower alkylamino; when n and m are 2 or 3, each of R² and R⁵ may be the same or different], a compound represented by the formula (II):



(wherein na, ma, R^{1A}, R^{2A}, R^{3A} and R^{5A} are as defined for the aforementioned n, m, R¹, R², R³ and R⁵, respectively) or a compound represented by the formula (III):



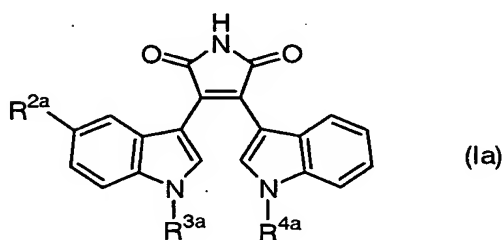
[wherein nb, mb, R^{1B}, R^{2B} and R^{5B} are as defined for the aforementioned n, m, R¹, R² and R⁵, respectively; R^{3B} and R^{4B} may be the same or different, and represent hydrogen, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, -COR⁶ (wherein R⁶ is as defined above), -COOR⁷ (wherein R⁷ is as defined above) or -OR⁸ (wherein R⁸ is as defined above), or R^{3B} and R^{4B} together form



(wherein k represents 1 or 2; X represents CH₂, NH, an oxygen

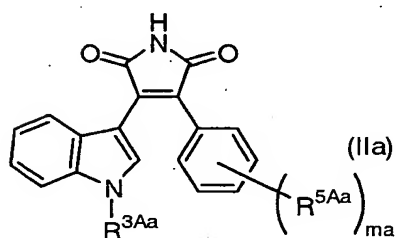
atom or a sulfur atom; R^9 represents hydroxy, carboxy, carbamoyl or lower alkoxy carbonyl)], or a pharmacologically acceptable salt thereof.

7. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits the activity of GSK-3 is a compound represented by the formula (Ia):



(wherein R^{2a} represents hydrogen, lower alkoxy, lower alkoxy carbonyl, aryl or nitro; R^{3a} and R^{4a} may be the same or different, and represent substituted or unsubstituted lower alkyl), or a pharmacologically acceptable salt thereof.

8. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits the activity of GSK-3 is a compound represented by the formula (IIa):



(wherein m_a is as defined above; R^{3Aa} represents substituted or unsubstituted lower alkyl; R^{5Aa} represents halogen), or a pharmacologically acceptable salt thereof.

9. The medical drug according to any one of claims

The chemical structure shows a central macrocyclic ring system, specifically a phthalocyanine derivative. It consists of four nitrogen atoms (N) arranged in a square planar geometry, with a central oxygen atom (O) bridging two of the nitrogens. The four nitrogen atoms are part of four benzene rings. A substituent R^9 is attached to one of the carbon atoms in the central macrocycle.

(wherein R⁹ is as defined above) or a pharmacologically acceptable salt thereof.

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3-[1-(3-hydroxypropyl)indole-3-yl]-4-(1-methyl-5-phenylindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-aminopropyl)indole-3-yl]-4-(1-methyl-5-phenylindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-hydroxypropyl)indole-3-yl]-4-(1-methyl-5-methoxycarbonylindole-3-yl)-1H-pyrrole-2,5-dione,

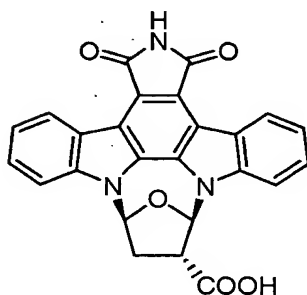
3-[1-(3-hydroxypropyl)indole-3-yl]-4-(1-methyl-5-nitroindole-3-yl)-1H-pyrrole-2,5-dione,

3-(1-methylindole-3-yl)-4-[1-(3-hydroxypropyl)-5-nitroindole-3-yl]-1H-pyrrole-2,5-dione,

3-(2-chlorophenyl)-4-(1-methylindole-3-yl)-1H-pyrrole-2,5-dione,

3-(2,4-dichlorophenyl)-4-(1-methylindole-3-yl)-1H-pyrrole-2,5-dione,

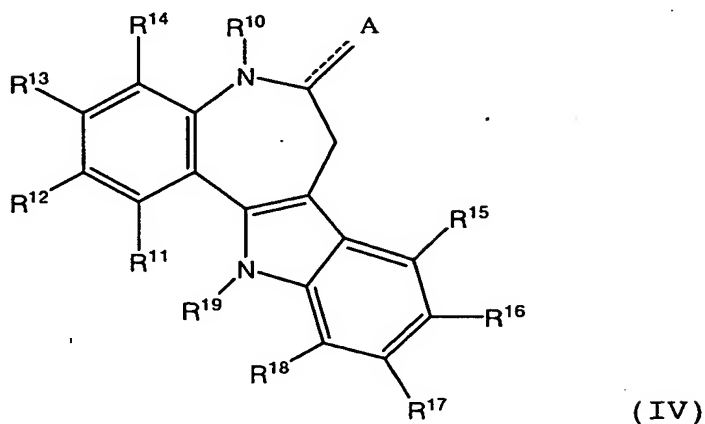
3-(2-chlorophenyl)-4-[1-(3-hydroxypropyl)indole-3-yl]-1H-pyrrole-2,5-dione, 4-[1-(3-aminopropyl)indole-3-yl]-3-(2-chlorophenyl)-1H-pyrrole-2,5-dione and



, or a pharmacologically acceptable salt thereof.

11. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits GSK-3 is a compound

represented by the formula (IV):



[wherein A is oxygen or sulfur coupled to the right by a single or double bond; R^{10} is selected from the group consisting of hydrogen, aryl, lower aliphatic substituents, particularly alkyl and lower alkyl ester; R^{11} - R^{14} are independently selected from the group consisting of alkoxy, amino, acyl, aliphatic substituents, particularly alkyl, alkenyl and alkynyl substituents, aliphatic alcohols, particularly alkyl alcohols, aliphatic nitriles, particularly alkyl nitriles, cyano, nitro, carboxyl, halogen, hydrogen, hydroxyl, imino and α,β -unsaturated ketones; R^{15} - R^{18} are independently selected from the group consisting of aliphatic substituents, particularly alkyl, alkenyl and alkynyl substituents, particularly lower aliphatic substituents, aliphatic alcohols, particularly alkyl alcohols, alkoxy, acyl, cyano, nitro, epoxy, haloalkyl groups, halogen, hydrogen and hydroxyl; R^{19} is selected from the group consisting of aliphatic groups, particularly lower alkyl groups, aliphatic alcohols, particularly alkyl alcohols,

carboxylic acids and hydrogen], or a pharmacologically acceptable salt thereof.

12. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits GSK-3 is a compound selected from the group consisting of 7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 2-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-chloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 11-chloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 10-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 8-bromo-6,11-dihydro-thieno[3',2':2,3]azepino[4,5-b]indol-5(4H)-one, 9-bromo-7,12-dihydro-4-methoxy-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-bromo-7,12-dihydro-4-hydroxy-indolo[3,2-d][1]benzazepin-6(5H)-one, 7,12-dihydro-4-methoxy-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-bromo-7,12-dihydro-2,3-dimethoxy-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-bromo-7,12-dihydro-2,3-dihydroxy-indolo[3,2-d][1]benzazepin-6(5H)-one, 7,12-dihydro-2,3-dimethoxy-indolo[3,2-d][1]benzazepin-6(5H)-one,

)-one, 7,12-dihydro-9-tri-
 fluormethyl-indolo[3,2-d][1]benzazepin-6(5H)-one, 7,12-di-
 hydro-2,3-dimethoxy-9-trifluoromethyl-indolo[3,2-d][1]-
 benzazepin-6(5H)-one, 2-bromo-7,12-dihydro-9-trifluoro-
 methyl-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-thion
 e,
 9-bromo-5,12-bis-(t-butyloxycarbonyl)-7,12-dihydro-indolo[
 3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-12-(t-butyloxycarbonyl)-7,12-dihydro-indolo[3,2-d]
 [1]benzazepin-6(5H)-one,
 9-bromo-5,7-bis-(t-butyloxycarbonyl)-7,12-dihydro-indolo-
 [3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-5,7,12-tri-(t-butyloxycarbonyl)-7,12-dihydro-indol
 o[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-5-methyloxycarbonylmethyl-indolo[3,2-
 d][1]benzazepin-6(5H)-one, 9-bromo-7,12-di-
 hydro-12-methyloxycarbonylmethyl-indolo[3,2-d][1]benz-
 azepin-6(5H)-one, 9-bromo-7,12-dihydro-12-(2-hydroxy-
 ethyl)-indolo[3,2-d][1]benzazepin-6(5H)-one,
 2,9-dibromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-
 one,
 8,10-dichloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)
 -one,
 9-cyano-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

9-bromo-7,12-dihydro-5-methyl-indolo[3,2-d][1]benzazepin-6
 (5H)-one, 5-benzyl-9-bromo-7,12-dihydro-5-methyl-indolo-
 [3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-12-methyl-indolo[3,2-d][1]benzazepin-
 6(5H)-one,
 9-bromo-12-ethyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6
 (5H)-one,
 9-bromo-7,12-dihydro-12-(2-propenyl)-indolo[3,2-d][1]-
 benzazepin-6(5H)-one, 7,12-dihydro-9-methyl-indolo[3,2-d]-
 [1]benzazepin-6(5H)-one, 7,12-dihydro-9-methoxy-indolo-
 [3,2-d][1]benzazepin-6(5H)-one,
 9-fluoro-7,12-dihydro-12-(2-propenyl)-indolo[3,2-d][1]benz
 azepin-6(5H)-one,
 11-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-2-(methyliminoamine)-indolo[3,2-d]-
 [1]benzazepin-6(5H)-one, 9-bromo-7,12-dihydro-2-(carboxylic
 acid)-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-10-hydroxy-indolo[3,2-d][1]benzazepin
 -6(5H)-one,
 9-bromo-7,12-dihydro-11-hydroxymethyl-indolo[3,2-d][1]-
 benzazepin-6(5H)-one,
 7,12-dihydro-4-hydroxy-indolo[3,2-d]-
 [1]benzazepin-6(5H)-one,
 7,12-dihydro-2,3-dihydroxy-indolo[3,2-d][1]benzazepin-6(5H
)-one,

2,3-dimethoxy-9-nitro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

9-cyano-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

2,3-dimethoxy-9-cyano-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-nitro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

3-(6-oxo-9-trifluoromethyl-5,6,7,12-tetrahydro-indolo[3,2-d][1]benzazepin-2-yl)-propionitrile,

2-bromo-9-nitro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

3-(6-oxo-9-trifluoromethyl-5,6,7,12-tetrahydro-indolo[3,2-d][1]benzazepin-2-yl)acrylonitrile,

2-(3-hydroxy-1-propinyl)-9-trifluoromethyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

2-iodo-9-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

2-(3-oxo-1-butenyl)-9-trifluoromethyl-7,12-tetrahydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

8-chloro-6,11-dihydro-thieno-

[3',2':2,3]azepino[4,5-b]indol-5(4H)-one, 2-iodo-9-trifluoro-

methyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

7,12-dihydro-pyrido[3',2':4,5]pyrrolo[3,2-d]-

[1]benzazepin-6(5H)-one, 11-methyl-7,12-dihydro-indolo-

[3,2-d][1]benzazepin-6(5H)-one, 2-[2-(1-hydroxycyclo-

hexyl)ethynyl]-9-trifluoromethyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 2-cyano-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 2-iodo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 11-ethyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 8-methyl-6,11-dihydro-thieno[3',2':2,3]azepino[4,5-b]indole-5(4H)-one and 3-(6-oxo-9-trifluoromethyl-5,6,7,12-tetrahydro-indolo[3,2-d][1]benzazepin-2-yl)acrylic acid, methyl ester, or a pharmacologically acceptable salt thereof.

13. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits GSK-3 is selected from the group consisting of 9-cyano-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-bromo-7,12-dihydro-2,3-dimethoxy-indolo[3,2-d][1]benzazepin-6(5H)-one, 2-bromo-7,12-dihydro-9-trifluoromethyl-indolo[3,2-d][1]benzazepin-6(5H)-one, 7,12-dihydro-2,3-dimethoxy-9-trifluoromethyl-indolo[3,2-d][1]benzazepin-6(5H)-one, 2,9-dibromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 7,12-dihydro-9-trifluoromethyl-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-chloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 8-bromo-6,11-dihydro-thieno[3',2':2,3]azepino[4,5-b]indole-5(4H)-one,

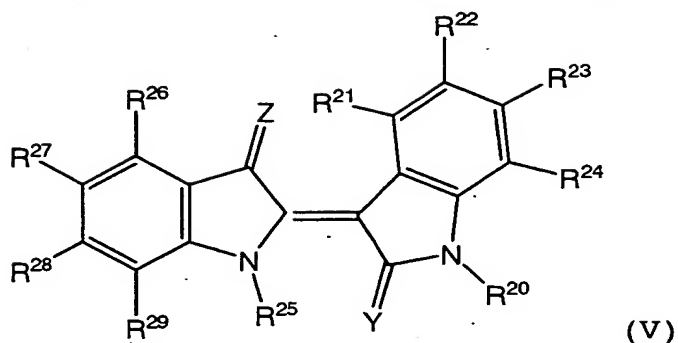
7,12-dihydro-9-methoxy-indolo[3,2-d][1]benzazepin-6(5H)-one,
 10-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 11-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 11-chloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-fluoro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-methyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-indolo[3,2-d]-
 [1]benzazepin-6(5H)-thione,
 8,10-dichloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-12-(2-hydroxyethyl)-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-2,3-dihydroxy-indolo[3,2-d][1]benzazepin-6(5H)-one,
 2-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 7,12-dihydro-2,3-dimethoxy-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-12-methyl-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-5-methyloxycarbonylmethyl-indolo[3,2-d][1]benzazepin-6(5H)-one and
 7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one.

14. The medical drug according to any one of claims 1 to 3 which is selected from the group consisting of

9-cyano-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-2,3-dimethoxy-indolo[3,2-d][1]benz-
 azepin-6(5H)-one,
 2-bromo-7,12-dihydro-9-trifluoromethyl-indolo[3,2-d][1]ben-
 zazepin-6(5H)-one,
 7,12-dihydro-2,3-dimethoxy-9-trifluoromethyl-indolo[3,2-d]
 [1]benzazepin-6(5H)-one,
 2,9-dibromo-7,12-dihydro-indolo[3,2-d][1]-
 benzazepin-6(5H)-one,
 7,12-dihydro-9-trifluoromethyl-indolo-
 [3,2-d][1]benzazepin-6(5H)-one,
 9-chloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 8-bromo-6,11-dihydro-thieno[3',2':2,3]azepino[4,5-b]indol-
 5(4H)-one,
 7,12-dihydro-9-methoxy-indolo[3,2-d][1]benzazepin-6(5H)-on
 e.

15. The medical drug according to any one of claims
 1 to 3 which is selected from the group consisting of
 9-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one.

16. The medical drug according to any one of claims
 1 to 3 wherein the substance that inhibits GSK-3 is a compound
 represented by the formula (V):



[wherein R^{20} and R^{25} which may be the same or different represent hydrogen; halogen; a hydroxy group; a methylene hydroxy group; a straight chain or branched C_1 to C_{18} -alkyl or alkoxy or methylenealkoxy group; a cycloalkyl group having 3 to 7 carbon atoms, and including one or more heteroatoms as needed; a substituted or unsubstituted aryl, aralkyl or aryloxy group having one or more heteroatoms as needed; a mono-, di- or trialkylsilyl group each independently having 1 to 6 carbon atoms within the straight chain or branched alkyl group; a mono-, di- or triarylsilyl group each independently having a substituted or unsubstituted aryl group; a trifluoromethyl group; -COM; -COOM; or a $-CH_2COOM$ group (wherein M represents hydrogen, a straight chain or branched C_1 to C_{18} -alkyl group substituted with one or more hydroxy and/or amino groups if necessary, or an aryl group, which may be substituted with one or more halogen, alkyl groups or alkoxy groups, having one or more heteroatoms if necessary); an $-NR^{30}R^{31}$ group (wherein R^{30} and R^{31} which may be the same or different represent hydrogen, a C_1 to C_{18} straight chain or branched alkyl group additionally

substituted with one or more hydroxy and/or amino groups if necessary, a substituted or unsubstituted aryl group including one or more heteroatoms if necessary); an acyl group; a $-\text{CH}_2-\text{NR}^{30}\text{R}^{31}$ methyleneamino group (wherein R^{30} and R^{31} have the meanings as defined above); a benzyl group having one or more heteroatoms in the benzene ring if necessary; a methylenecycloalkyl group having 3 to 7 carbon atoms, and including one or more heteroatoms if necessary; a physiological amino acid group coupled to a nitrogen atom as an amide; an O-glycoside or N-glycoside glycoside of which being selected from monosaccharides or disaccharides; or a methylenesulfonate group; R^{21} , R^{22} , R^{23} , R^{24} , R^{26} , R^{27} , R^{28} and R^{29} which may be the same or different represent hydrogen; halogen; a hydroxy group; a nitroso group; a nitro group; an alkoxy group; a straight chain or branched C_1 to C_{18} alkyl group substituted with one or more hydroxy and/or amino groups if necessary; a substituted or unsubstituted aryl group having one or more heteroatoms if necessary; a substituted or unsubstituted aralkyl group having one or more heteroatoms if necessary; a substituted or unsubstituted aryloxy group having one or more heteroatoms if necessary; a substituted or unsubstituted methylenearyloxy group having one or more heteroatoms if necessary; a cycloalkyl group having 3 to 7 carbon atoms, and including one or more heteroatoms if necessary; a methylenecycloalkyl group having 3 to 7 carbon atoms, and including one or more heteroatoms if

necessary; a trifluoromethyl group; $-\text{COM}$; $-\text{COOM}$; or a CH_2COOM group (wherein M represents hydrogen, a straight chain or branched C_1 to C_{18} -alkyl group additionally substituted with one or more hydroxy and/or amino groups if necessary, or an aryl group, which may be substituted with one or more halogen atoms, alkyl groups or alkoxy groups, having one or more heteroatoms if necessary); an $-\text{NR}^{30}\text{R}^{31}$ group (wherein R^{30} and R^{31} which may be the same or different represent hydrogen, a straight chain or branched C_1 to C_{18} -alkyl group additionally substituted with one or more hydroxy and/or amino groups if necessary, a substituted or unsubstituted aryl group including one or more heteroatoms if necessary, an acyl group; or form a part of cycloalkyl having 3 to 7 carbon atoms with the nitrogen atom including one or more heteroatoms if necessary); a $-\text{CONR}^{30}\text{R}^{31}$ group (wherein R^{30} and R^{31} have the meanings as defined above); a hydroxylamino group; a phosphate group; a phosphonate group; a sulfate group; a sulfonate group; a sulfonamide group; an $-\text{SO}_2\text{NR}^{30}\text{R}^{31}$ group (wherein R^{30} and R^{31} have the meanings as defined above); an $-\text{N}=\text{N}-\text{R}^{32}$ azo group (wherein R^{32} represents an aromatic group substituted with one or more carboxyl, phosphoryl or sulfonate groups if necessary, or an O-glycoside or N-glycoside group glycoside of which being selected from monosaccharides or disaccharides); or R^{20} and R^{24} , and R^{25} and R^{29} together form a ring having one to four CH_2 groups each independently substituted if necessary, respectively; Y and Z which may be

the same or different represent an oxygen; sulfur; selenium; tellurium atom; an NR^{33} group (wherein R^{33} represents hydrogen, a straight chain or branched C_1 to C_{18} alkyl group substituted with one or more carboxyl, phosphoryl or sulfonate groups if necessary, a substituted or unsubstituted aryl group including one or more heteroatoms if necessary, an aralkyl group or a sulfonate group); or $-\text{NOR}^{33}$ (wherein R^{33} group have the meanings as defined above)], or a pharmacologically acceptable salt thereof.

17. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits GSK-3 is a compound selected from the group consisting of indirubin, 5-iodo-indirubin, 5-bromo-indirubin, 5-chloro-indirubin, 5-fluoro-indirubin, 5-methyl-indirubin, 5-nitro-indirubin, 5- SO_3H -indirubin, 5'-bromo-indirubin, 5-5'-dibromo-indirubin and 5'-bromo-indirubin 5-sulfonic acid, or a pharmacologically acceptable salt thereof.

18. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits GSK-3 is a compound selected from the group consisting of indirubin-3'-monooxime, 5-iodo-indirubin-3'-monooxime and 5- SO_3Na -indirubin-3'-monooxime, or a pharmacologically acceptable salt thereof.

19. The medical drug according to any one of claims 1 to 3 wherein the substance that inhibits GSK-3 is

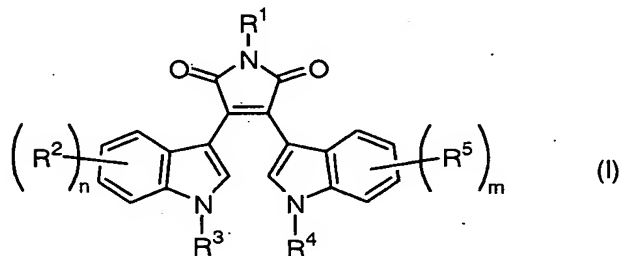
indirubin-3'-monooxime or a pharmacologically acceptable salt thereof.

20. An agent for the promotion of neuropoiesis of a neural stem cell which comprises a substance that inhibits the activity of GSK-3, as an active ingredient.

21. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits the activity of GSK-3 is lithium or a pharmacologically acceptable salt thereof.

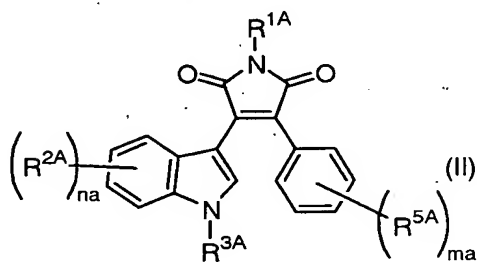
22. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits the activity of GSK-3 is a bisindolylmaleimide derivative, a 3-aryl-4-indolylmaleimide derivative, an indolocarbazole derivative or an indolo[3,2-d][1]benzazepin-6(5H)-one derivative, or a pharmacologically acceptable salt thereof.

23. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits the activity of GSK-3 is a compound represented by the formula (I):



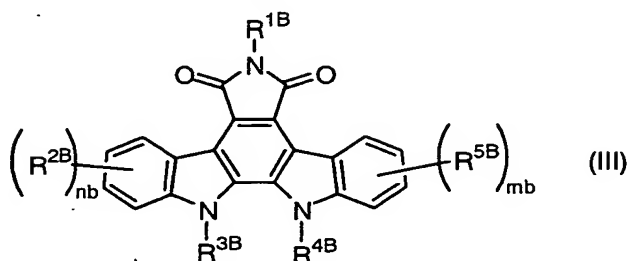
[wherein n and m may be the same or different, and represent an integer of 1 to 3; R¹, R³ and R⁴ may be the same or different, and represent hydrogen, substituted or unsubstituted lower

alkyl, substituted or unsubstituted lower alkenyl, $-\text{COR}^6$ (wherein R^6 represents hydrogen, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, substituted or unsubstituted aryl or substituted or unsubstituted cycloalkyl), $-\text{COOR}^7$ (wherein R^7 represents hydrogen, substituted or unsubstituted lower alkyl, substituted or unsubstituted aryl or substituted or unsubstituted cycloalkyl) or $-\text{OR}^8$ (wherein R^8 represents hydrogen, substituted or unsubstituted lower alkyl, substituted or unsubstituted aryl or substituted or unsubstituted cycloalkyl); R^2 and R^5 may be the same or different, and represent hydrogen, substituted or unsubstituted lower alkyl, a substituted or unsubstituted lower alkenyl, substituted or unsubstituted lower alkoxy, substituted or unsubstituted lower alkoxycarbonyl, substituted or unsubstituted aryl, carboxy, halogen, hydroxy, nitro, amino, or mono- or di-lower alkylamino; when n and m are 2 or 3, each of R^2 and R^5 may be the same or different], a compound represented by the formula (II):

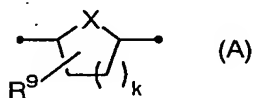


(wherein n_{a} , m_{a} , $\text{R}^{1\text{A}}$, $\text{R}^{2\text{A}}$, $\text{R}^{3\text{A}}$ and $\text{R}^{5\text{A}}$ are as defined for the aforementioned n , m , R^1 , R^2 , R^3 and R^5 , respectively) or a compound

represented by the formula (III):

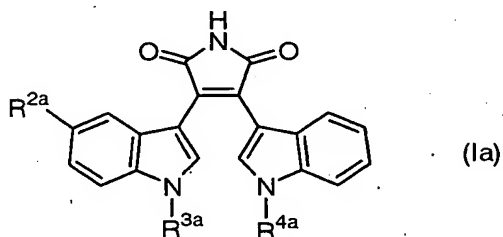


[wherein nb, mb, R^{1B} , R^{2B} and R^{5B} are as defined for the aforementioned n, m, R^1 , R^2 and R^5 , respectively; R^{3B} and R^{4B} may be the same or different, and represent hydrogen, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkenyl, $-\text{COR}^6$ (wherein R^6 is as defined above), $-\text{COOR}^7$ (wherein R^7 is as defined above) or $-\text{OR}^8$ (wherein R^8 is as defined above), or R^{3B} and R^{4B} together form



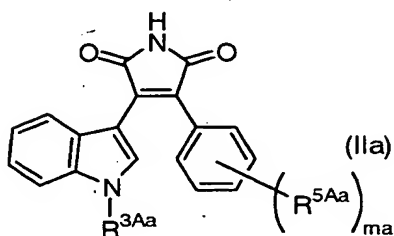
(wherein k represents 1 or 2; X represents CH_2 , NH, an oxygen atom or a sulfur atom; R^9 represents hydroxy, carboxy, carbamoyl or lower alkoxy carbonyl)], or a pharmacologically acceptable salt thereof.

24. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits the activity of GSK-3 is a compound represented by the formula (Ia):



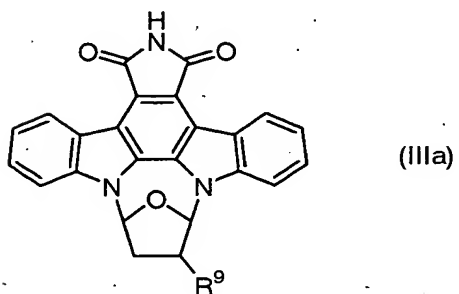
(wherein R^{2a} represents hydrogen, lower alkoxy, lower alkoxycarbonyl, aryl or nitro; R^{3a} and R^{4a} may be the same or different, and represent substituted or unsubstituted lower alkyl), or a pharmacologically acceptable salt thereof.

25. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits the activity of GSK-3 is a compound represented by the formula (IIa):



(wherein ma is as defined above; R^{3Aa} represents substituted or unsubstituted lower alkyl; R^{5Aa} represents halogen), or a pharmacologically acceptable salt thereof.

26. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits the activity of GSK-3 is a compound represented by the formula (IIIa):



(wherein R^9 is as defined above), or a pharmacologically acceptable salt thereof.

27. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits the activity of GSK-3 is a compound selected from the group consisting of

3,4-bis(1-methylindole-3-yl)-1H-pyrrole-2,5-dione,

3-(1-methylindole-3-yl)-4-(1-propylindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-cyanopropyl)indole-3-yl]-4-(1-methylindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-amino-propyl)indole-3-yl]-4-(1-methylindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-carboxypropyl)indole-3-yl]-4-(1-methylindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-carbamoyl-propyl)indole-3-yl]-4-(1-methylindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-aminopropyl)indole-3-yl]-4-(1-methyl-5-propyloxyindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-hydroxypropyl)indole-3-yl]-4-(1-methyl-5-phenylindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-aminopropyl)indole-3-yl]-4-(1-methyl-5-phenylindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-hydroxypropyl)indole-3-yl]-4-(1-methyl-5-methoxycarbonylindole-3-yl)-1H-pyrrole-2,5-dione,

3-[1-(3-hydroxypropyl)indole-3-yl]-4-(1-methyl-5-nitroindole-3-yl)-1H-pyrrole-2,5-dione,

3-(1-methylindole-3-yl)-4-[1-(3-hydroxypropyl)-5-nitroindole-3-yl]-1H-pyrrole-2,5-dione,

1e-3-yl]-1H-pyrrole-2,5-dione,

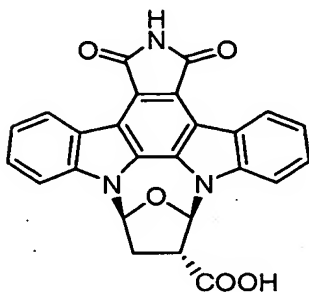
3-(2-chlorophenyl)-4-(1-methylindole-3-yl)-1H-pyrrole-2,5-dione,

3-(2,4-dichlorophenyl)-4-(1-methylindole-3-yl)-1H-pyrrole-2,5-dione,

3-(2-chlorophenyl)-4-[1-(3-hydroxy-propyl)indole-3-yl]-1H-pyrrole-2,5-dione,

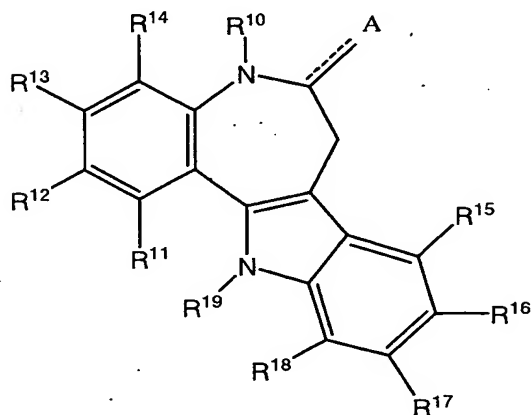
4-[1-(3-amino-propyl)indole-3-yl]-3-(2-chlorophenyl)-1H-pyrrole-2,5-dione

and



, or a pharmacologically acceptable salt thereof.

28. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits GSK-3 is a compound represented by the formula (IV):



(IV)

[wherein A is oxygen or sulfur coupled to the right by a single

or double bond; R^{10} is selected from the group consisting of hydrogen, aryl, lower aliphatic substituents, particularly alkyl and lower alkyl ester; R^{11} - R^{14} are independently selected from the group consisting of alkoxy, amino, acyl, aliphatic substituents, particularly alkyl, alkenyl and alkynyl substituents, aliphatic alcohols, particularly alkyl alcohols, aliphatic nitriles, particularly alkyl nitriles, cyano, nitro, carboxyl, halogen, hydrogen, hydroxyl, imino and α,β -unsaturated ketones; R^{15} - R^{18} are independently selected from the group consisting of aliphatic substituents, particularly alkyl, alkenyl and alkynyl substituents, particularly lower aliphatic substituents, aliphatic alcohols, particularly alkyl alcohols, alkoxy, acyl, cyano, nitro, epoxy, haloalkyl groups, halogen, hydrogen and hydroxyl; R^{19} is selected from the group consisting of aliphatic groups, particularly lower alkyl groups, aliphatic alcohols, particularly alkyl alcohols, carboxylic acids and hydrogen], or a pharmacologically acceptable salt thereof.

29. The agent for the promotion of neuropoiesis according to claim 20 which is selected from the group consisting of 7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 2-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-chloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 11-chloro-7,12-dihydro-indolo-

[3,2-d][1]benzazepin-6(5H)-one,
 10-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 8-bromo-6,11-dihydro-thieno[3',2':2,3]azepino[4,5-b]indol-
 5(4H)-one,
 9-bromo-7,12-dihydro-4-methoxy-indolo[3,2-d][1]benzazepin-
 6(5H)-one, 9-bromo-7,12-dihydro-4-hydroxy-indolo[3,2-d]-
 [1]benzazepin-6(5H)-one, 7,12-dihydro-4-methoxy-indolo-
 [3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-2,3-dimethoxy-indolo[3,2-d][1]benzaze
 pin-6(5H)-one,
 9-bromo-7,12-dihydro-2,3-dihydroxy-indolo[3,2-d][1]benzaze
 pin-6(5H)-one,
 7,12-dihydro-2,3-dimethoxy-indolo[3,2-d][1]-
 benzazepin-6(5H)-one,
 7,12-dihydro-9-trifluormethyl-indolo-
 [3,2-d][1]benzazepin-6(5H)-one,
 7,12-dihydro-2,3-dimethoxy-9-trifluoromethyl-indolo[3,2-d]
 [1]benzazepin-6(5H)-one,
 2-bromo-7,12-dihydro-9-trifluoromethyl-indolo-
 [3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-indolo[3,2d][1]benzazepin-6(5H)-thion
 e,
 9-bromo-5,12-bis-(t-butyloxycarbonyl)-7,12-dihydro-indolo[
 3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-12-(t-butyloxycarbonyl)-7,12-dihydro-indolo[3,2-d]

[1]benzazepin-6(5H)-one,
 9-bromo-5,7-bis-(t-butyloxycarbonyl)-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-bromo-5,7,12-tri-(t-butyloxycarbonyl)-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-5-methyloxycarbonylmethyl-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-bromo-7,12-dihydro-12-methyloxycarbonylmethyl-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-bromo-7,12-dihydro-12-(2-hydroxyethyl)-indolo[3,2-d][1]benzazepin-6(5H)-one,
 2,9-dibromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 8,10-dichloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-cyano-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-5-methyl-indolo[3,2-d][1]benzazepin-6(5H)-one,
 5-benzyl-9-bromo-7,12-dihydro-5-methyl-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-12-methyl-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-12-ethyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-12-(2-propenyl)-indolo[3,2-d][1]benzazepin-6(5H)-one,

7,12-dihydro-9-methyl-indolo[3,2-d][1]benzazepin-6(5H)-one,
 7,12-dihydro-9-methoxy-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-fluoro-7,12-dihydro-12-(2-propenyl)-indolo[3,2-d][1]benzazepin-6(5H)-one,
 11-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-2-(methylinino-amine)-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-2-(carboxylic acid)-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-10-hydroxy-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-11-hydroxymethyl-indolo[3,2-d][1]benzazepin-6(5H)-one,
 7,12-dihydro-4-hydroxy-indolo[3,2-d][1]benzazepin-6(5H)-one,
 7,12-dihydro-2,3-dihydroxy-indolo[3,2-d][1]benzazepin-6(5H)-one,
 2,3-dimethoxy-9-nitro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-cyano-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 2,3-dimethoxy-9-cyano-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 9-nitro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,
 3-(6-oxo-9-trifluoromethyl-5,6,7,12-tetrahydro-indolo[3,2-d][1]benzazepin-2-yl)-propionitrile,
 2-bromo-9-nitro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(

5H)-one,

3-(6-oxo-9-trifluoromethyl-5,6,7,12-tetrahydro-indolo[3,2-d][1]benzazepin-2-yl)acrylonitrile,

2-(3-hydroxy-1-propinyl)-9-trifluoromethyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

2-iodo-9-bromo-7,12-dihydro-indolo[3,2-d][1]-

benzazepin-6(5H)-one, 2-(3-oxo-1-butenyl)-9-trifluoromethyl-7,12-tetrahydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

8-chloro-6,11-dihydro-thieno[3',2':2,3]azepino[4,5-b]indol-5(4H)-one,

2-iodo-9-trifluoromethyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 7,12-dihydro-pyrido-

[3',2':4,5]pyrrolo[3,2-d][1]benzazepin-6(5H)-one,

11-methyl-7,12-dihydro-indolo[3,2-d][1]-benzazepin-6(5H)-one,

2-[2-(1-hydroxycyclohexyl)ethinyl]-9-trifluoromethyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

2-cyano-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

2-iodo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

11-ethyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

8-methyl-6,11-dihydro-thieno[3',2':2,3]azepino[4,5-b]-indol-5(4H)-one

and

3-(6-oxo-9-trifluoromethyl-5,6,7,12-tetrahydro-indolo[3,2-d][1]benzazepin-2-yl)acrylic acid, methyl ester.

30. The agent for the promotion of neuropoiesis according to claim 20 which is selected from the group consisting of

9-cyano-7,12-dihydro-indolo[3,2-d][1]-benzazepin-6(5H)-one,

9-bromo-7,12-dihydro-2,3-dimethoxy-indolo-[3,2-d][1]benzazepin-6(5H)-one,

2-bromo-7,12-dihydro-9-trifluoromethyl-indolo[3,2-d][1]benzazepin-6(5H)-one,

7,12-dihydro-2,3-dimethoxy-9-trifluoromethyl-indolo[3,2-d][1]benzazepin-6(5H)-one,

2,9-dibromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

7,12-dihydro-9-trifluoromethyl-indolo[3,2-d][1]benzazepin-6(5H)-one,

9-chloro-7,12-dihydro-indolo[3,2-d][1]-benzazepin-6(5H)-one,

8-bromo-6,11-dihydro-thieno-[3',2':2,3]azepino[4,5-b]indole-5(4H)-one,

7,12-dihydro-9-methoxy-indolo[3,2-d][1]benzazepin-6(5H)-one,

10-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

11-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

11-chloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

9-fluoro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

9-methyl-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one,

9-bromo-7,12-dihydro-indolo[3,2-d][1]-

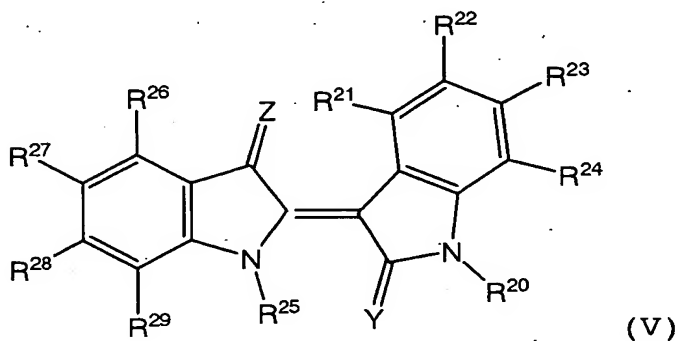
benzazepin-6(5H)-thione,
 8,10-dichloro-7,12-dihydro-indolo-
 [3,2-d][1]benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-12-(2-hydroxyethyl)-indolo[3,2-d][1]b
 enzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-2,3-dihydroxy-indolo[3,2-d][1]benzaze
 pin-6(5H)-one, 2-bromo-7,12-dihydro-indolo-
 [3,2-d][1]benzazepin-6(5H)-one,
 7,12-dihydro-2,3-dimethoxy-indolo[3,2-d][1]benzazepin-6(5H
)-one,
 9-bromo-7,12-dihydro-12-methyl-indolo[3,2-d][1]benzazepin-
 6(5H)-one,
 9-bromo-7,12-dihydro-5-methyloxycarbonylmethyl-indolo-
 [3,2-d][1]benzazepin-6(5H)-one and
 7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one.

31. The agent for the promotion of neuropoiesis
 according to claim 20 which is selected from the group consisting
 of 9-cyano-7,12-dihydro-indolo[3,2-d][1]-
 benzazepin-6(5H)-one,
 9-bromo-7,12-dihydro-2,3-dimethoxy-indolo[3,2-d][1]benzaze
 pin-6(5H)-one, 2-bromo-7,12-di-
 hydro-9-trifluoromethyl-indolo[3,2-d][1]benzazepin-6(5H)-o
 ne, 7,12-dihydro-2,3-dimethoxy-9-trifluoromethyl-indolo-
 [3,2-d][1]benzazepin-6(5H)-one,
 2,9-dibromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-

one, 7,12-dihydro-9-trifluoro-methyl-indolo[3,2-d][1]benzazepin-6(5H)-one, 9-chloro-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one, 8-bromo-6,11-dihydro-thieno[3',2':2,3]azepino[4,5-b]indol-5(4H)-one, 7,12-dihydro-9-methoxy-indolo[3,2-d][1]benzazepin-6(5H)-one.

32. The agent for the promotion of neuropoiesis according to claim 20 which is selected from the group consisting of 9-bromo-7,12-dihydro-indolo[3,2-d][1]benzazepin-6(5H)-one.

33. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits GSK-3 is a compound represented by the formula (V):



[wherein R^{20} and R^{25} which may be the same or different represent hydrogen; halogen; a hydroxy group; a methylene hydroxy group; a straight chain or branched C_1 to C_{18} -alkyl or alkoxy or methylenealkoxy group; a cycloalkyl group having 3 to 7 carbon atoms, and including one or more heteroatoms as needed; a substituted or unsubstituted aryl, aralkyl or aryloxy group

having one or more heteroatoms as needed; a mono-, di- or trialkylsilyl group each independently having 1 to 6 carbon atoms within the straight chain or branched alkyl group; a mono-, di- or triarylsilyl group each independently having a substituted or unsubstituted aryl group; a trifluoromethyl group; -COM; -COOM; or a -CH₂COOM group (wherein M represents hydrogen, a straight chain or branched C₁ to C₁₈-alkyl group substituted with one or more hydroxy and/or amino groups if necessary, or an aryl group, which may be substituted with one or more halogen, alkyl groups or alkoxy groups, having one or more heteroatoms if necessary); an -NR³⁰R³¹ group (wherein R³⁰ and R³¹ which may be the same or different represent hydrogen, a C₁ to C₁₈ straight chain or branched alkyl group additionally substituted with one or more hydroxy and/or amino groups if necessary, a substituted or unsubstituted aryl group including one or more heteroatoms if necessary); an acyl group; a -CH₂-NR³⁰R³¹ methyleneamino group (wherein R³⁰ and R³¹ have the meanings as defined above); a benzyl group having one or more heteroatoms in the benzene ring if necessary; a methylenecycloalkyl group having 3 to 7 carbon atoms, and including one or more heteroatoms if necessary; a physiological amino acid group coupled to a nitrogen atom as an amide; an O-glycoside or N-glycoside glycoside of which being selected from monosaccharides or disaccharides; or a methylenesulfonate group; R²¹, R²², R²³, R²⁴, R²⁶, R²⁷, R²⁸ and R²⁹ which may be the

same or different represent hydrogen; halogen; a hydroxy group; a nitroso group; a nitro group; an alkoxy group; a straight chain or branched C₁ to C₁₈ alkyl group substituted with one or more hydroxy and/or amino groups if necessary; a substituted or unsubstituted aryl group having one or more heteroatoms if necessary; a substituted or unsubstituted aralkyl group having one or more heteroatoms if necessary; a substituted or unsubstituted aryloxy group having one or more heteroatoms if necessary; a substituted or unsubstituted methylenearyloxy group having one or more heteroatoms if necessary; a cycloalkyl group having 3 to 7 carbon atoms, and including one or more heteroatoms if necessary; a methylenecycloalkyl group having 3 to 7 carbon atoms, and including one or more heteroatoms if necessary; a trifluoromethyl group; -COM; -COOM; or a CH₂COOM group (wherein M represents hydrogen, a straight chain or branched C₁ to C₁₈-alkyl group additionally substituted with one or more hydroxy and/or amino groups if necessary, or an aryl group, which may be substituted with one or more halogen atoms, alkyl groups or alkoxy groups, having one or more heteroatoms if necessary); an -NR³⁰R³¹ group (wherein R³⁰ and R³¹ which may be the same or different represent hydrogen, a straight chain or branched C₁ to C₁₈-alkyl group additionally substituted with one or more hydroxy and/or amino groups if necessary, a substituted or unsubstituted aryl group including one or more heteroatoms if necessary, an acyl group; or form

a part of cycloalkyl having 3 to 7 carbon atoms with the nitrogen atom including one or more heteroatoms if necessary); a $-\text{CONR}^{30}\text{R}^{31}$ group (wherein R^{30} and R^{31} have the meanings as defined above); a hydroxylamino group; a phosphate group; a phosphonate group; a sulfate group; a sulfonate group; a sulfonamide group; an $-\text{SO}_2\text{NR}^{30}\text{R}^{31}$ group (wherein R^{30} and R^{31} have the meanings as defined above); an $-\text{N}=\text{N}-\text{R}^{32}$ azo group (wherein R^{32} represents an aromatic group substituted with one or more carboxyl, phosphoryl or sulfonate groups if necessary, or an O-glycoside or N-glycoside group glycoside of which being selected from monosaccharides or disaccharides); or R^{20} and R^{24} , and R^{25} and R^{29} together form a ring having one to four CH_2 groups each independently substituted if necessary, respectively; Y and Z which may be the same or different represent an oxygen; sulfur; selenium; tellurium atom; an NR^{33} group (wherein R^{33} represents hydrogen, a straight chain or branched C_1 to C_{18} alkyl group substituted with one or more carboxyl, phosphoryl or sulfonate groups if necessary, a substituted or unsubstituted aryl group including one or more heteroatoms if necessary, an aralkyl group or a sulfonate group); or $-\text{NOR}^{33}$ (wherein R^{33} group have the meanings as defined above)], or a pharmacologically acceptable salt thereof.

34. The agent for the promotion of neurogenesis according to claim 20 wherein the substance that inhibits GSK-3 is a compound selected from the group consisting of indirubin,

5-iodo-indirubin, 5-bromo-indirubin, 5-chloro-indirubin, 5-fluoro-indirubin, 5-methyl-indirubin, 5-nitro-indirubin, 5-SO₃H-indirubin, 5'-bromo-indirubin, 5-5'-dibromo-indirubin and 5'-bromo-indirubin 5-sulfonic acid, or a pharmacologically acceptable salt thereof.

35. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits GSK-3 is a compound selected from the group consisting of indirubin-3'-monooxime, 5-iodo-indirubin-3'-monooxime and 5-SO₃Na-indirubin-3'-monooxime, or a pharmacologically acceptable salt thereof.

36. The agent for the promotion of neuropoiesis according to claim 20 wherein the substance that inhibits GSK-3 is indirubin-3'-monooxime or a pharmacologically acceptable salt thereof.

37. A neuron obtained by culturing a neural stem cell in the presence of the agent for the promotion of neuropoiesis according to any one of claims 20 to 36.

38. A method of the manufacture of a neuron which comprises culturing a neural stem cell in the presence of the agent for the promotion of neuropoiesis according to any one of claims 20 to 36 to allow neogenesis of the neuron, and collecting the neuron from the culture.

39. A method of the regeneration of a nerve which comprises administering a substance that inhibits GSK-3.

40. Use of a substance that inhibits GSK-3 for the manufacture of a nerve regenerating drug.

41. Use of a substance that inhibits GSK-3 for the manufacture of an agent for the promotion of neurogenesis of a neural stem cell.